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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PHILPOTT, JUSTIN M	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 01/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/242,822	FICHE, GEORGES	
	Examiner	Art Unit	
	Justin M Philpott	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 3-6, filed November 13, 2003, with respect to the rejection(s)of claim(s) 1-5 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Watanabe.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of U.S. Patent No. 5,802,049 to Watanabe.

Regarding claim 1, Wong teaches devices for switching ATM cells (figures 1-4; primary reference is made to the general architecture of figure 1 which figures 2- 4 are based upon) establishing a single path per virtual circuit having N.R inputs (k.n inputs) and N.R outputs (l.p outputs), N and R (k or l, and n or p) being two integers not less than two, the device comprising at least two stages, including an inlet stage (n x m stage) comprising a plurality of matrices (1 to k) and having R.N sets (n.k sets) of Q outputs (r) and an outlet stage (s x p stage) comprising a plurality of matrices (1 to *l*) and having R.N sets (p.l sets) of Q' inputs (r) – wherein n=p, m=n, and m=s (see page 709, col. 1, lines 4 and 17) and wherein figures 1 and 2 indicate k=l, thus, n=m=s=p=R and k=l=N. Furthermore, the above is characterized in that for the flow of data

carried by any intermediate link (one of the links in a grouping of r links, see page 708, column 2) that is part of the single path set up between an input and an output (r) to be a subset of the incoming flux at that input and also a subset of the outgoing flux at that output, each input (n) of the inlet stage (n x m stage) can be connected to an output of the inlet stage (at m, one of the lines of a corresponding grouping of r lines) which can be selected only from Q outputs (r lines) associated with that input (e.g., r lines are provided "for each path between the two stages"); and in that each output (p) of the outlet stage (s x p stage) can be connected to an input of the outlet stage (at s, one of the lines of a corresponding grouping of r lines) which can be selected only from Q' inputs (r lines) of the output stage associated with that output (p). However, Wong may not specifically disclose an exclusive association between each inlet stage input/outlet stage output and each set of Q outputs/Q' inputs (r lines) such that the flow of data at each input of the inlet stage can be directed to each matrix of the outlet stage.

Watanabe teaches an improvement in ATM cell switching and, specifically, teaches an exclusive association between each of an inlet stage (e.g., secondary SRM 121-123 in FIG. 1) input and outlet stage (e.g., cubic SRM 131-133) output such that the flow of data at each input of the inlet stage can be directed to each matrix of the outlet stage. Further, while Watanabe may disclose a preferred embodiment (e.g., FIG. 1) wherein a primary SRM stage (e.g., primary SRM 111-113) may not also have the above-mentioned association (i.e., may not have cell copying functionality), Watanabe additionally contemplates an embodiment with such association by disclosing that the primary SRMs only "*normally* do not have the function of copying a cell" in order to "prevent the plurality of cells from the single cell in a single root from being output finally to the same leaf" [emphasis added] (e.g., see col. 3, lines 17-23). The teachings of

Watanabe provide routing with high probability of success, reducing the lost-call rate when new subscribers are added for a point-to-multipoint connection (e.g., see col. 2, lines 26-38). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Watanabe to the system of Wong in order to provide reduce the lost-call rate when new subscribers are added for a point-to-multipoint connection.

Regarding claims 2, 3 and 5, Watanabe teaches having R.N outputs (e.g., 3.3 outputs) organized into R sets (e.g., 3 sets) of N outputs (3 outputs) with each set corresponding to a respective one of the R inputs (3 inputs). As discussed above, the teachings of Watanabe provide routing with high probability of success, reducing the lost-call rate when new subscribers are added for a point-to-multipoint connection (e.g., see col. 2, lines 26-38). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Watanabe to the system of Wong in order to provide reduce the lost-call rate when new subscribers are added for a point-to-multipoint connection.

Further, regarding claim 3, Wong teaches (figure 2) an inlet sage (n x m stage), a central stage (k x k stage), and an outlet stage (m x n stage) characterized in that, Q being equal to R (n), the inlet stage comprises N (k) matrices each having R (n) inputs each of which can be connected to an output of that matrix which can be selected only from R (m, or n wherein m=n; see page 709, col. 1, line 17) outputs of the set of outputs corresponding to that input, and the central stage (k x k) comprises a set of R (m) matrices each having N (k) inputs and N (k) outputs wherein the R (m) outputs of each set of outputs of the inlet stage are connected to inputs belonging to the same set of R (k) matrices of the central stage. Furthermore, the above is characterized in that, Q' being equal to R (n), the outlet stage comprises N (k) matrices each of which have R (m)

inputs and R (n) outputs, wherein each output of a matrix can be connected to an input of that matrix which can be selected only from R (m) inputs corresponding to that output. Further, as discussed above regarding claim 2, Watanabe teaches having R.N outputs (e.g., 3.3 outputs) organized into R sets (e.g., 3 sets) of N outputs (3 outputs) with each set corresponding to a respective one of the R inputs (3 inputs). As discussed above, the teachings of Watanabe provide routing with high probability of success, reducing the lost-call rate when new subscribers are added for a point-to-multipoint connection (e.g., see col. 2, lines 26-38). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Watanabe to the system of Wong in order to provide reduce the lost-call rate when new subscribers are added for a point-to-multipoint connection.

Further, regarding claim 5, the device of Wong in view of Watanabe teaches a switching device according to claim 3 as discussed above. Furthermore, while Wong in view of Watanabe may not specifically disclose N and R values such that $N=2.R^2$, it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Appellant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of the system of Wong in view of

Watanabe since it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value.

Regarding claim 4, Wong teaches (figure 3) an inlet stage (n x m stage), a central stage (l x l' stage), and an outlet stage (m' x n' stage) characterized in that Q and Q' (r and r') are equal to R (e.g., see page 709, col. 2, line 17 and page 710, col. 1, line 10 wherein l=l' and m=m' and therefore r=r'=(Q=Q')=m=R), the central stage (l x l' stage) includes R^2 matrices (r=r', therefore the l x l' stage includes r^2 or R^2 matrices), and the matrices of the inlet stage and the matrices of the central stage are organized into R sets (n sets) each including N matrices (h matrices) of the inlet stage and R matrices (g matrices, where g may be equal to m) of the central stage and the matrices of the outlet stage are organized into N sets (h' sets) of R matrices (m' matrices, where m' may equal r'). Furthermore, the above is characterized in that each of the R.N matrices of the inlet stage (n x m stage) has a single input (i.e., the first/top input at n) and R outputs (r lines), each of the R^2 matrices of the central stage has N inputs and N outputs (l inputs and l' outputs) – the inputs being respectively connected to an output of each of the matrices of the inlet stage that belong to the same set of matrices, and each of the R.N matrices of the outlet stage (m' x n' stage) has R inputs (r' lines) and a single output (i.e., the first/top output at n'), those R inputs (r' inputs) being connected to outputs respectively belonging to the R sets of matrices of the central stage and of the inlet stage.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.

Justin M Philpott

HUY D. VU
SUPERVISORY PATENT EXAMINER
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